

309 3/4"

Work Order ID 141606

141606

Page 1

Friday, February 05, 2016 8:46:23 AM

Item ID: D3953-3 Accept *N900040100* Setup Start *NS1*

Revision ID: Stop *NS2*

Item Name: Gas Spring Stud, Lid

Start Date: 2/3/2016 Start Qty: 35.00 *35* Cust Item ID:

Required Date: 2/3/2016 Req'd Qty: 35.00 *35* Customer:

Reference:

Approvals: Process Plan: MLS Date: FEB 09 2016 Tooling: _____ Date: _____

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3953	C

100

0.01

100

Doosan

Memo

0.06

Doosan Lathe

Turn as per folio FA852 & DWG

FOLIO REV: AA

DWG REV: C

DEBURR

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.01

Quality Control

DAS

45

9-89

2016-3-21

DAS

45

9-89

2016-3-21

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QS1042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐ No Re-verification	☐ Pressure/Forced	☐ Temperature/Cure	☐ Power Loss/Surge	☐ Positioned Wrong				
Design ☐	☐ Operator	☐ Bending	☐ Set-up	☐ Folio/Program	☐ Outside Dimensions				
Doc/Data ☐	☐ Offset/Setup	☐ Centre Not Concentric	☐ BOM/Route	☐ Grain	☐ Over/Under tolerance				
Equip/Tooling ☐	☐ Supplier	☐ Cracks	☐ Broken/Damage/Defect	☐ Weld	☐ Part Incorrect				
Handling/Pre ☐	☐ Training	☐ Crimp/Kink/Ripple/Wave	☐ Inspection Incomplete/Unqualified	☐ Wrong Stock Pulled	☐ Part Lost/Missing				
Material ☐	☐ Use for Testing	☐ Cuffs	☐ Contamination	☐ Out of Sequence	☐ Part Moved				
Internal Transport ☐	☐ Poor Information	☐ Crushing	☐ Countersink	☐ Off-set	☐ Drawing				
Tribal Knowledge ☐	☐ Rushing	☐ Heat Treat	☐ Cut Too Short	☐ Mislabeled	☐ Finish				
LOA ☐	☐ Product Improvement	☐ Wave/Twist in Tube	☐ Instructions Incomplete/Unclear	☐ Fit/Function	☐ Misread				
Substation ☐	☐ Process Improvement	☐ Marks/Chatter	☐ Drill Holes	☐ Misaligned/off center	☐ Turning Sequence				
Past Expiry Date ☐	☐ Manufacturing Process	OTHER :							
Misidentified ☐	☐ Past Due								

Work Order ID 141606

Friday, February 05, 2016 8:46:23 AM

141606

Page 2

Item ID: D3953-3 Accept ***N900040100*** Setup Start ***NS1***
 Revision ID: Stop ***NS2***
 Item Name: Gas Spring Stud, Lid
 Start Date: 2/3/2016 Start Qty: 35.00 ***35*** Cust Item ID:
 Required Date: 2/3/2016 Req'd Qty: 35.00 ***35*** Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.01				35	Ø		DAS 40 9-88 16/03/21
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>St062</u> Memo	0.00 0.01				35			DAS 6 9-88 MAR 2 2 2016
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.06							MCS MAR 2 2 2016

MAR 2 2 2016

MCS

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
		OTHER : ☐							

Picklist Print

Friday, February 05, 2016 8:46:27 AM

Page 1

Work Order ID: 141606

141606

Parent Item: D3953-3

D3953-3

Parent Item Name: Gas Spring Stud, Lid

Start Date: 2/3/2016

Required Date: 2/3/2016

Start Qty: 35.00

Required Qty: 35.00

Comments: IPP RevA: New issue DD verified by:EC
per dwg revC DD 10.03.02 verified by:EC

IPP Rev:B as

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304RO.750		Purchased		No		100	f	33.8200	0.125	4.605262			

M304RO 750

304 SS Roundbar .750

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT029	33.82	
M128005	0.247	
M128496	9.573	
M133587	12	
M134158	12	

4.729 ^{pt} DAS
45 2016-3-21
9-89

DQA: _____ Date: _____

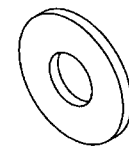
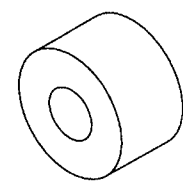
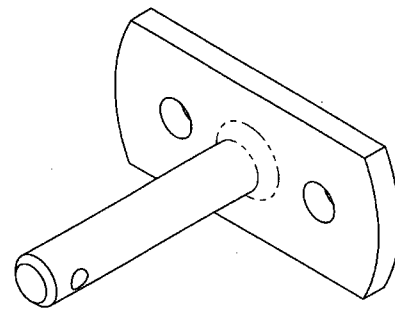
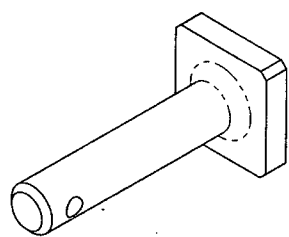
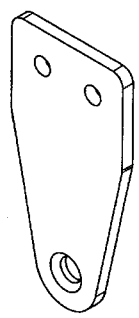


WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																



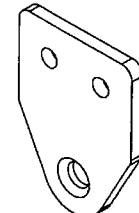
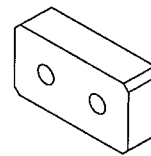
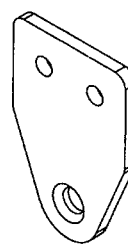
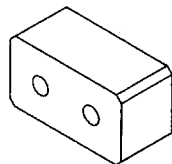
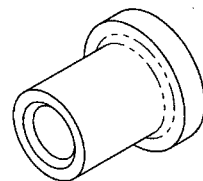
D3953-1 GAS SPRING BRACKET
(FULL LID)

D3953-3 GAS SPRING STUD, LID

D3953-5 GAS SPRING STUD, BASE

D3953-7 GAS SPRING SPACER

D3953-9 GAS SPRING WASHER



RELEASED
2010-02-26

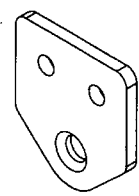
D3953-11 GAS SPRING SPACER

D3953-13 GAS SPRING SPACER
(FULL LID)

D3953-15 GAS SPRING BRACKET
(SPLIT LID)

D3953-17 GAS SPRING SPACER
(SPLIT LID)

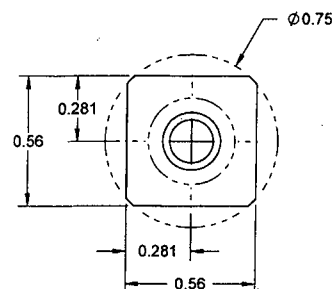
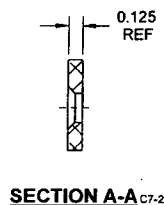
D3953-19 GAS SPRING BRACKET
(SQUARE BASKET)



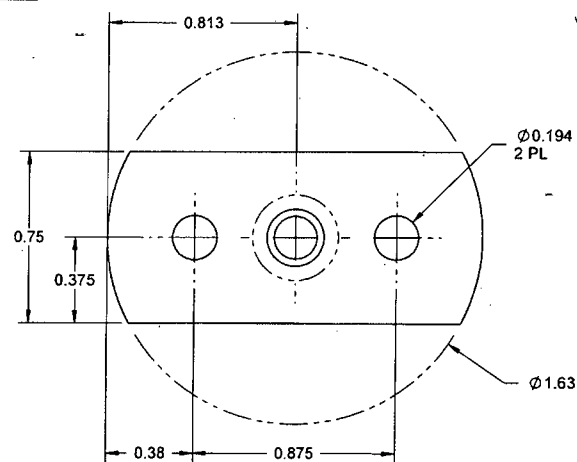
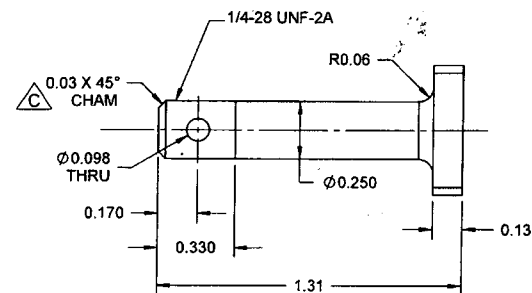
D3953-21 GAS SPRING BRACKET
(SQUARE BASKET)

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
WITHOUT NOTICE
WORK ORDER
NO. 141606 MW
1602-09

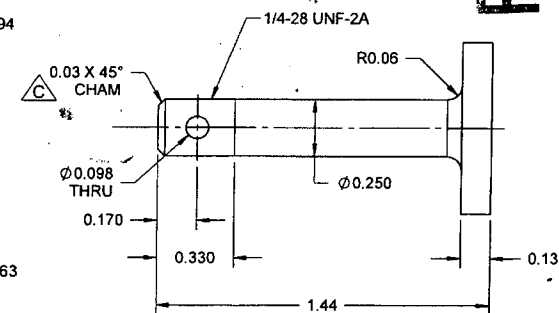
C	PARTS -19 & -21 ADDED (SHT 1&4); CSK CALLOUT WAS CHAM (C6-2, B6-3, C6-4); Q SYMM WAS Q SYM ABOUT (C7-2, C7-4); SECTION C-C REPOSITIONED TO B2-4 REASON: ADDL PARTS REQD; DRAFTING ERRORS		JPH	10.01.29
B	SHEET 3 ZONE C1, DIM 0.05 MIN WAS 0.13, MULTIPLE DIMENSIONS MIN/MAX REMOVED TOLERANCE ADDED, REASON: DIFFICULTY INSTALLING COTTER PIN AT NEXT ASSY		AJS	09.11.11
A	NEW ISSUE		AJS	09.07.27
REV.	DESCRIPTION		BY	DATE
DESIGN	AJS	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3953 TITLE GAS SPRING LID COMPONENTS COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.		
DRAWN	JPH			
CHECKED	90			
MFG. APPR.	3			
APPROVED	1			
DE APPR.	1	REV. C SHEET 1 OF 4 SCALE NTS		
DATE	10.01.29			



D3953-3 GAS SPRING STUD, LID



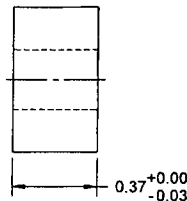
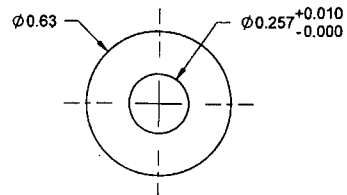
D3953-5 GAS SPRING STUD, BASE



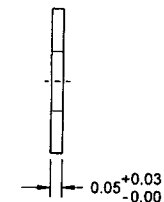
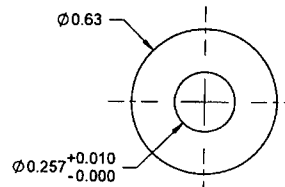
RELEASED
2010-02-26

- 2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
7) WEIGHT -1: 0.11 lbs
 -3: 0.03 lbs
 -5: 0.06 lbs

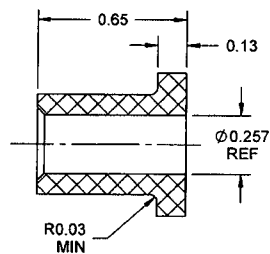
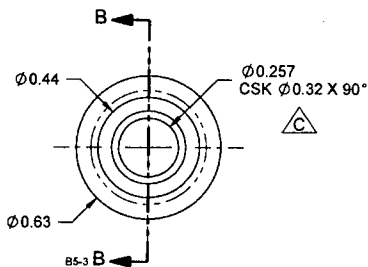
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DRAWN	JPH		DRAWING NO.	REV. C
CHECKED	<i>[Signature]</i>		D3953	SHEET 2 OF 4
MFG. APPR.	<i>[Signature]</i>		TITLE	SCALE
APPROVED	<i>[Signature]</i>		GAS SPRING LID COMPONENTS	NTS
DE APPR.	<i>[Signature]</i>	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE. IT IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT PERMISSION IN WRITING FROM DART AEROSPACE LTD. THIS DOCUMENT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCIALIZED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.		
DATE		10.01.29		



D3953-7 GAS SPRING SPACER

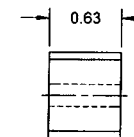
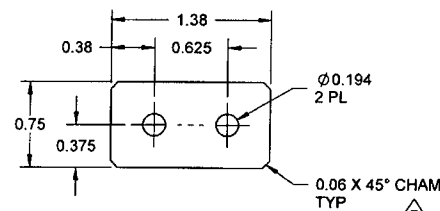


D3953-9 GAS SPRING WASHER



SECTION B-B B7-3

D3953-11 GAS SPRING SPACER



D3953-13 GAS SPRING SPACER

NOTES:

1) MATERIAL -7,-9 & -11: DELRIN II 150E OR ACETRON GP ACETAL, BLACK
REF DART SPEC M-DELIN-R

-13: AISI 304 STAINLESS STEEL BAR
REF DART SPEC M304B

2) FINISH: N/A

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED

5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

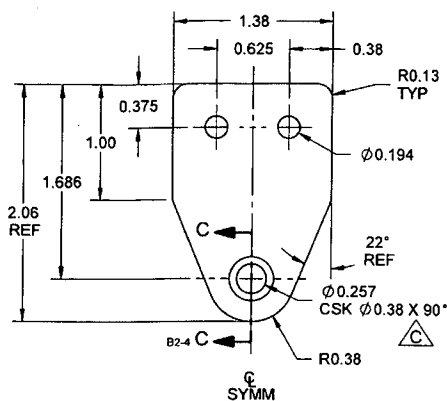
6) IDENTIFICATION -13 ONLY: IDENTIFY WITH DART P/N "D3953-13" USING FINE POINT PERMANENT INK MARKER

7) WEIGHT -7/-9/-11: < 0.01 lbs EACH

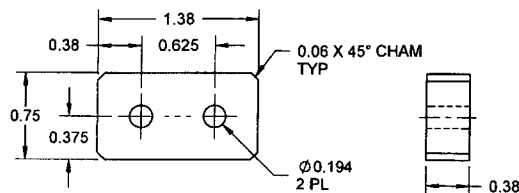
-13: 0.17 lbs

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2010-02-26

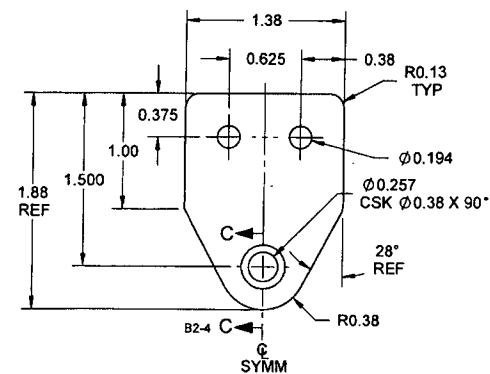
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DRAWN	JPH		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D3953	SHEET 3 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GAS SPRING LID COMPONENTS	NTS
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	



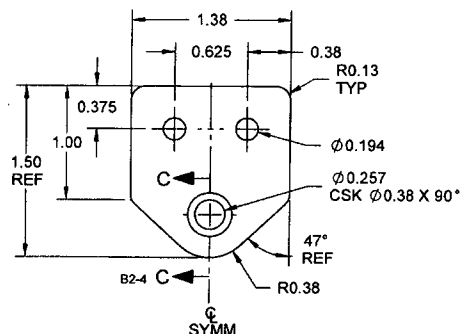
D3953-15 GAS SPRING BRACKET
(SPLIT LID)



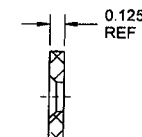
D3953-17 GAS SPRING SPACER
(SPLIT LID)



D3953-19 GAS SPRING BRACKET
(SQUARE BASKET)



D3953-21 GAS SPRING BRACKET
(SQUARE BASKET)



SECTION C-C

- NOTES:**
- 1) MATERIAL -15/-19/-21: 304/316 STAINLESS STEEL SHEET ANNEALED 2B FINISH, PER MIL-S-5059 OR AMS 5513/5524 OR ASTM A240 OR ASME SA240 REF DART SPEC M304S11GA
 - 2) FINISH: N/A
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D3953-X" USING FINE POINT PERMANENT INK MARKER
 - 7) WEIGHT -15: 0.08 lbs
-17: 0.10 lbs
-19: 0.07 lbs
-21: 0.06 lbs

-17: AISI 304 STAINLESS STEEL BAR
REF DART SPEC M304B

DESIGN	AJS	DART AEROSPACE LTD	
DRAWN	JPH	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>[Signature]</i>	D3953	SHEET 4 OF 4
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	GAS SPRING LID COMPONENTS NTS	
DATE	10.01.29	COPYRIGHT © 2009 BY DART AEROSPACE LTD	
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